

Benjamin Darwin Oppenheimer

CONTACT INFORMATION	Leiden Observatory Neils Bohrweg 2 Leiden 2333 CA The Netherlands	Voice: +31 (0)71 527 5595 Fax: +31 (0)71 527 5743 E-mail: oppenheimer@strw.leidenuniv.nl http://luca.as.arizona.edu/~oppen/IGM/
RESEARCH INTERESTS	Galaxy Formation and Evolution, N-body+SPH Simulations, Intergalactic Medium, Chemical Enrichment, Quasar Absorption Line Spectroscopy, Galaxy Assembly, Scientific Visualization	
EDUCATION	University of Arizona Ph.D., Astronomy, August 2008 <ul style="list-style-type: none">• Thesis Title: “The History of Enrichment of the Intergalactic Medium Using Cosmological Simulations”• Adviser: Romeel J. Davé M.S. Astronomy, March 2004 Harvard University A.B., Astronomy & Physics, <i>cum laude</i> , June 1999	
FELLOWSHIPS	VENI Fellowship, Leiden University 2010-2013 Proposal “Fourteen Billion Years of Baryonic Galaxy Formation” defended and awarded 8/2010 including 3 years and 250,000 Euros support, supplanted NOVA Fellowship. NOVA Fellowship, Leiden University 2009-2012 Three years of funding at Leiden University. Faculty contact: Joop Schaye.	
RESEARCH APPOINTMENTS	VENI Fellowship, Leiden University 2010 - 2013 NOVA Fellowship, Leiden University 2009 - 2010 Post-doctoral Research Associate, University of Arizona 2008 - 2009 Supervisor: Romeel J. Davé Graduate Research Assistant, University of Arizona 2002 - 2008 Master’s Thesis with John Biegging: Developed modeling technique using spectropolarimetry and HST imaging to obtain circumstellar structure, grain size distribution, and chemist of dust around post-AGB stars. Research Experience for Undergraduates, Arecibo, Puerto Rico 1998 Programmed new data reduction algorithm used to minimize noise in observations with the Arecibo dish. Observed a survey of OH/IR stars with Murray Lewis. Research Assistant, Harvard-Smithsonian Center for Astronomy 1996 - 1997 Analyzed trends in 75 years of AAVSO data of Z Camelopardalis, identifying trends and periods in work done with Scott Kenyon and Janet Mattei. Research Assistant, American Association of Variable Star Observers 1993-1995	
TEACHING APPOINTMENTS	Graduate Teaching Assistant, University of Arizona 1999-2000,2006 Led honors special project section in introductory astronomy class. Substitute lectured.	

PROFESSIONAL
SERVICE

- Frequent referee for *Astrophysical Journal*, *Astrophysical Letters*, *Monthly Notices of the Royal Astronomical Society*
- NSF Allocation Panel P101895, *Cosmological Simulations* June 2010

CURRENT
ACTIVITIES

- Development and implementation of non-equilibrium cooling and ionization in Gadget-3 simulations at Leiden.
- Continued maintenance, development, and running of our research group's version of Gadget-2 code. Continued development of reduction routines and visualization software.
- Co-supervision of Master's student at Leiden and Ph.D. student at Arizona.
- Contributing co-investigator on recent proposals for Hubble Space Telescope (Cycle 18- 5 proposals, 2 successful, Cycle 17- 3 proposals, 2 successful, Multi-Cycle Treasury-failed), Very Large Telescope (*X-SHOOTER*, *SINFONI*), and Very Large Array.
- Involvement in weekly journal club and group meetings of Joop Schaye, Leiden Galaxy Group journal clubs and monthly meetings, frequent telecons with Gadget-2 collaboration and *Cosmic Origins Spectrograph* Large Project collaboration, and co-organizer of Leiden Observatory Lunch Talks.

SELECTED
PRESENTATIONS

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| 3rd Netherlands Galaxies and Cosmology Meeting, Groningen, Netherlands | Nov. 2010 |
| Leiden University, Discovery Talk | Nov. 2010 |
| South Africa Astronomical Observatory, Colloquium | Oct. 2010 |
| H-Metal Workshop, El Escorial, Spain, Invited Review | Sept. 2010 |
| Observatories of the Carnegie Institution, Colloquium | June 2010 |
| Institute d'Astrophysique Paris, Coffee Talk | Apr. 2010 |
| Cosmological Reionization Conference, Allahabad, India, Invited Talk | Feb. 2010 |
| Missing Baryons, Accretion, & Feedback, Sydney, Australia, Invited Talk | Dec. 2009 |
| Chemical Enrichment of the IGM, Lorentz Center, The Netherlands | May 2009 |
| Kavli Institute for Particle Astrophysics and Cosmology, Cosmology Seminar | Oct. 2008 |
| Kavli Institute for Cosmological Physics, Weekly Seminar | Sept. 2008 |
| Cosmic Odyssey of the Elements Conference, Aegina, Greece | June 2008 |
| Chemodynamics: From First Stars to Local Galaxies, Lyon, France | July 2006 |

EXTERNAL
FUNDING

- Co-I, HST Proposal ID 12248, Cycle 18, "How Dwarf Galaxies Got That Way: Mapping Multiphase Gaseous Halos and Galactic Winds Below L^* ", 129 COS orbits
- Co-I HST Proposal ID 12264, Cycle 18, "The Relationship between Gas and Galaxies for $0 < z < 1.2$ ", 66 COS orbits
- Co-I, HST Proposal ID 11598, Cycle 17, "How Galaxies Acquire their Gas: A Map of Multiphase Accretion and Feedback in Gaseous Galaxy Halos", 134 COS orbits
- Co-I, HST Proposal ID 11751, Cycle 17, "Simulations of COS intergalactic HI and metal absorbers", \$88,900
- Co-I, National Center for Supercomputing Applications, "Hydrodynamic Simulations of Galaxy Formation including Cosmic-Scale Feedback", 420,000 CPU hours on the Abe Cluster

COMPUTER SKILLS C, Fortran, MPI, OpenMP, IDL, IRAF, SQL, ASP, Visual Basic

PROFESSIONAL
EXPERIENCE

rfpMarket 2000-2001
Software developer.